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ABSTRACT

Because economic geography is viewed as a field with too many different aspects for one person to master, teaching an introductory course in the subject poses the challenge of selecting an organizing theme. One specific approach, organized around higher level generalizations and theories, is the use of location theory. Coupling location theory with the trend toward problem solving can result in the theme of the locational analysis of welfare economics. Welfare economics, which is the evaluating and ranking of economic alternatives open to society, is a topic in need of research but available to classroom consideration in part because of its interest to students. Examples of use of this theme range from the simple question of where ice cream vendors should stand on the beach for the greatest benefit to their customers to the location of a factory for the greatest benefit to the immediate population and to society as a whole. In the footnotes economic geography texts and materials, some of which use the locational theory approach, are cited. (JH)

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INTRODUCTORY ECONOMIC GEOGRAPHY: PROBLEM-SOLVING OR A TEACHING PROBLEM?

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Economic geography has long occupied a prominent position within the discipline of geography. In the classic James and Jones volume, American Geography: Inventory and Prospect, published twenty years ago, six of the twenty-one chapters dealing with the sub-disciplines of geography treat the field of economic geography.[1] More recently, the basic position of economic geography in the undergraduate major program in college geography has been documented by the Hart report, entitled Undergraduate Major Programs in American Geography.[2] The annual Schwendeman directory demonstrates the continuing large enrollments in introductory courses in economic geography.[3] Textbook publishers have recognized the sizable market in economic geography by the publication of nearly thirty college textbooks in this field since 1960.[4] In Introductory Geography: Viewpoints and Themes, three chapters, or almost forty-five percent of the total pages, deal directly with the topic of economic geography, and if one were to include Kohn's related discussion of the work of the "Iowa School," an even larger share would be devoted to this field.[5] In short, the importance of economic geography in the undergraduate curriculum is undisputed and everywhere recognized.

The challenge is therefore obvious to all who teach introductory economic geography: How does one select an organizing theme and structure a course around it? The approach followed in James and Jones has not

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proven helpful. Economic geography was viewed as "a group of fields" involving "so many different aspects . . . and so many different procedures in the analysis of the different aspects that no one person could become equally competent in all of them."[6] These groups of fields share in common only that they each deal with the way people make a living in different places. Distinct literature developed in such daughter fields as manufacturing, transportation, agricultural, resource, marketing, and recreational geography. As a result, classes in introductory economic geography attempted to survey each of these fields, usually with emphasis on covering the most important types of economic activities around the world, such as major industries, significant agricultural crops, and leading mineral products. Textbooks followed, or lead as the case may be, much the same approach.

In 1967 Robert McNee, in his famous "hevea braziliensis" paper, called for an end to the endless detail so commonly cluttering introductory geography courses.[7] Rather than courses designed to survey mountainous facts, he suggested teaching the conceptional structure of the discipline and illustrated this conceptional structure for the production system of economic geography. In this way, the considerable gap between the research frontiers in economic geography and the introductory economic geography course may be meaningfully reduced. Likewise, Edward Taaffe, also writing in 1967, argued against the teaching of massive detail and against the mystical goal of complete coverage in introductory economic geography courses.[8] Instead of teaching a compendium of unrelated material following the commodity by commodity, occupation by occupation, or region by region approach, Taaffe forcefully articulated the pedagogic advantages of developing a course around higher level generalizations and theories, specifically

location theory, as illustrated, for example, in the report entitled The Science of Geography.[9]

By utilizing location theory as a central theme, one could present locational generalizations and spatial concepts which could be applied to a wide variety of specific spatial patterns. It is not the patterns so much that need to be memorized, as with the world distribution of mica or zinc, as it is the ideas and concepts which need to be absorbed as a basis for application to particular kinds of economic activities. We may then organize the field, after Haggett, around the locational concepts expressed as nodel, linear, surface, and hierarchial patterns and processes, rather than the traditional subject matter divisions.[10] Such a change in emphasis has been reflected in some, though not all, recently published textbooks in economic geography, the most notable example being the book by Lloyd and Dicken, Location in Space: A Theoretical Approach to Economic Geography.[11]

Recent Changes

With the recent focus in geography on the human condition and contemporary social issues, the field of economic geography finds itself undergoing further change. Related to this altered focus is the greater concern with behavioral dimensions of spatial patterns and processes, as emphasized by the Hurst text, A Geography of Economic Behavior.[12] These recent changes in the field have led to critical re-evaluations of approaches to economic geography, perhaps most alarmingly expressed by Tietze in an editorial in Geoforum: "We stand before a methodological vacuum in research on the quality of life in economic geography."[13] Also to the point, Bell, in his attempt at social forecasting, contends that today "the two major axes of stratification in Western society are property and knowledge. Alongside them is a political system that increasingly

manages the two."[14] Economic geography has long emphasized the property component of the economy, commonly viewing property in terms of production units. The concern with the economic aspects of knowledge in a spatial framework has been largely ignored, as has, for the most part, the impact of political systems on economic activity.

A perspective on this issue is provided by Chisholm in his review article in Progress in Geography.[15] To summarize, Chisholm observed that location theory, as the core of economic geography, has focused on the firm and is thus related to micro-economics. Such location theory has tended to be normative, and there has been increased reaction against unrealistic elements associated with theories of the location of firms. Chisholm then asked "whether the micro-economics of the firm is an appropriate point from which to start looking for a normative location theory?"[16] As an alternative, he turned to welfare economics as having relevance for location theory. Although the field of welfare economics provides little for direct transfer and would lead to macro-location theory (implying a regional or national level of economic analysis), the theory would be from "a planner's view of society and not the view of individual actors in that society."[17]

An Approach To The Problem

With the increased emphasis in research in recent years on societal problems in all of the social and behavioral sciences, the possibility of developing locational analysis along the welfare economics approach in economic geography provides considerable challenge. While basically the success or failure in developing welfare locational theory depends on research by economic geographers over the next several years, the possibilities for classroom introduction of locational concepts from welfare

economics can be selectively and partially achieved at present. As indicated, the welfare approach is consistent with a problem-solving method of learning, since the fundamental issue addressed, in the normative sense, is where will economic activity locate to produce the greatest good for the society? This is a problem which, if properly introduced, will have interest and relevance for all students. Furthermore, delving into the realm of welfare location theory is not incompatible with treatment of traditional micro-location theory and may be in fact taught as an extension of the latter. Although spatial elements of welfare may be integrated with all topics covered in a course in economic geography, an immediately obvious place for such treatment is the material on regional and urban planning, so commonly tagged onto the end of the course and lacking continuity with what has gone before.

Theoretical welfare economics is that branch of economics which evaluates and ranks economic alternatives open to society.[18] From an economic geography point of view, the concern is with evaluating alternative locational distributions of economic activity. The introduction of the spatial dimension adds formidable difficulties, since alternative economic spatial systems will have, geographically, quite uneven, and at present largely unknown, impacts on society. The processes of the distribution of welfare in society are far from perfectly understood from a strictly economic point of view, to say nothing of the contribution from economic geography. The remainder of this paper cites some examples from welfare locational analysis for classroom use.

We may start with the rather well-known problem of the ice-cream vendor on a beach, with the assumptions of a bounded linear market, evenly spaced purchasers, with consumer minimization of distance traveled to buy

ice-cream. Under free market competition, two ice-cream vendors would agglomerate at the center of the beach, each serving the consumers on either side. Under a social welfare solution, however, the two sellers would locate an equal distance apart such as, once again, to serve exactly one-half the market. This second solution provides social welfare to the consumers who do not, on the average, have to travel as far to buy ice-cream as under the market competitive system. Thus we have a simple example, already familiar to economic geography instructors, to illustrate an elementary social welfare locational strategy.

At a somewhat higher level of sophistication the student may be introduced to land rent and market area analysis, both from a social welfare perspective. These are adequately discussed by Chisholm.[19] Land rent, a consequence of locational patterns of output for goods and services, may be examined among alternative locational patterns. For classroom purposes, generalized maps of land rent under clustered versus dispersed production patterns may be evaluated. Market area analysis under different pricing systems may be approached from the view of consumer benefits, leading to different kinds of optimal location than from the perspective of the firm.

On the topic of industrial location, discussion would center on the location of manufacturing units, not from the firm's maximum profit assumptions, but from the maximum social welfare theme. Minimizing locational costs reflects an efficient use of resources and is consistent with the social welfare approach. In addition, however, long-run considerations must be introduced. For example, agglomeration economies, efficient from a firm's point of view, may reduce the quality of living over a sizable area by the resulting high density of population. Industrial consumption

of a particular material may minimize a firm's short-term costs but raise the long-range social costs. The geographical distribution of U. S. defense contracts exerts a significant impact on the various regional economies of the country, and yet the award of these contracts is not based on this economic impact. The issue is most critical from a welfare location position.

Transportation reflects another topic which may be considered from a social welfare outlook. The distribution of welfare among the population is related to the availability and quality of transportation services. If availability of opportunity were a primary social objective, both the location of these opportunities and access to them would take on a particular pattern. In many states, a basic welfare criterion, or at least a political expendiency, has been to establish some maximum distance that a member of the population is located away from an institution of higher learning. The geometric layout of routes may take on high areal density or reflect heavy utilization of a few routes. Each alternative has different welfare outcomes.

Finally, the spatial pattern and processes of the metropolis, the foci of so much economic activity, may be studied from alternative locational strategies ppen to society. This immensely important topic thrusts economic geography squarely into the realm of planning and public policy discussions. The factors behind a firm's locational decision in an urban area may be optimal for the firm but induce costs to society in general, since the locational decision of one establishment widely influences other locations throughout the metropolitan system. Muller analyzes in detail some of the human consequences of metropolitan economic geography.[20]

Conclusions

Although locational analysis of welfare economics has not progressed very far at present, a definite trend appears to be in this direction for future research in economic geography, even though it has not been explicitly recognized as such by most geographers.[21] To avoid the long time lag between research findings and textbook publication, it is here suggested that instructors introduce elements of welfare locational problems into their economic geography courses, even in the face of the current paucity of geographic research around this theme. Much of the material presented would of necessity be in part at a speculative level but could be framed into a problem-solving approach, testing the ingenuity of the instructor as well as the creative thinking of the students. The approach to introductory economic geography suggested here retains the theoretical perspective of the past fifteen years, extending its base to ecompass alternative locational strategies, rather than reviving in new garb the dormant anti-theoretical and anti-quantitative views of the past, as certain recent writers would advocate.[22] Surely the economic geography of the human condition, following welfare locational analysis, demands a theoretical foundation on which meaningful problem-solving may be built. The alternative is all too likely to be the teaching problem typically confronting the economic geography instructor today.

FOOTNOTES

1. Preston E. James and Clarence F. Jones, editors, American Geography: Inventory and Prospect (Syracuse, N. Y.: Syracuse University Press, 1954).
2. John Fraser Hart, editor, Undergraduate Major Programs in American Geography (Washington, D. C., Association of American Geographers, Commission on College Geography, Publication No. 6, 1968), see especially pp. 57-63. It is unfortunate that economic geography was not given emphasis in Geography in Undergraduate Liberal Education (Washington, D. C.: Association of American Geographers, 1965).
3. Joseph R. Schwendeman, Sr., and Joseph R. Schwendeman, Jr., Directory of College Geography of the United States (Richmond, Kentucky: Eastern Kentucky University, annual).
4. See footnotes 11 and 12 for other economic geography textbooks published since 1960. John W. Alexander, Economic Geography (Englewood Cliffs, N. J.: Prentice-Hall, 1963); Hans A. Boesch, A Geography of World Economy (Princeton, N. J.: Van Nostrand, 1963); Ronald Boyce, The Bases of Economic Geography (New York: Holt, Rinehart and Winston, 1974); Michael Chisholm, Geography and Economics (New York: Praeger, 1966); Arthur H. Doerr, An Introduction to Economic Geography (Dubuque, Iowa: William C. Brown Co., 1969); Fred E. Dohrs and Lawrence M. Sommers, eds., Economic Geography: Selected Readings (New York: Thomas Y. Crowell Co., 1970); Loyal Durand, Economic Geography (New York: Thomas Y. Crowell Co., 1961); D. W. Fryer, World Economic Development (New York: McGraw-Hill, 1965); Howard F. Gregor, Environment and Economic Life (Princeton, N. J., 196); Paul F. Griffin, Ronald L. Chatham, Ajmer Singh, and Wayne R. White, Culture, Resources, and Economic Activity (Boston: Allyn and

Bacon, 1971); Richard M. Highsmith, Jr., ed Case Studies in World Geography: Occupance and Economy Types (Englewood Cliffs, N.J.: Prentice-Hall, 1961); Richard M. Highsmith, Jr., and J. Granville Jensen, Geography of Commodity Production (Philadelphia: J. B. Lippincott, Co., 1963); Richard M. Highsmith, Jr. and Ray M. Northam, World Economic Activities: A Geographic Analysis (New York: Harcourt, Brace, and World, 1968); Lawrence A. Hoffman, Economic Geography (New York: Ronald Press, 1965); Clarence F. Jones and Gordon G. Darkenwald, Economic Geography (New York: Macmillan, 1965); Richard Morrill, Spatial Organization of Society (North Scituate, Mass.: Duxbury Press, Second Edition, 1974); Harold H. McCarty and James B. Lindberg, A Preface to Economic Geography (Englewood Cliffs, N. J.: Prentice-Hall, 1965); Robert B. McNee, A Primer on Economic Geography (New York: Random House, 1971); Howard G. Roepke, Readings in Economic Geography (New York: John Wiley, 1967); J. Rutherford, M. I. Logan and G. J. Missen, New Viewpoints in Economic Geography (Sydney, Australia: Martindale Press, 1966); Robert H. T. Smith, Edward J. Taaffe, and Leslie J. King, Readings in Economic Geography: The Location of Economic Activity (Chicago; Rand McNally, 1968); Richard S. Thoman and Peter Corbin, The Geography of Economic Activity (New York: McGraw-Hill, Third Edition, 1974); Richard S. Thoman and Donald J. Patton, Focus on Geographic Activity: A Collection of Original Studies (New York: McGraw-Hill, 1964); William Van Royen and Nels A. Bengston, Fundamentals of Economic Geography (Englewood Cliffs, N. J.: Prentice-Hall, 1964); C. L. Vinge and A. G. Vinge, Economic Geography (Totowa, N. J.: Littlefield, Adams, 1966); C. Langdon White, Paul F. Griffin and Thomas L. McKnight, World Economic Geography (Belmont, Calif.:

Wadsworth, 1964); and Maurice H. Yeates, An Introduction to Quantitatives Analysis in Economic Geography (New York: McGraw-Hill, 1968).

5. Introductory Geography: Viewpoints and Themes (Washington, D. C.: Association of American Geographers, Commission of College Geography, Publication No. 5, 1967).
6. James and Jones, op. cit., p. 241.
7. Robert B. McNee, "Toward Stressing Structure in Geographic Instruction or Good-by to Hevea Braziliensis and All That," Introductory Geography: Viewpoints and Themes, op. cit., pp. 31-44.
8. Edward J. Taaffe, "Introductory Economic Geography: Selected Ideas on Thorough Coverage?" Introductory Geography: Viewpoints and Themes, op. cit., pp. 51-58.
9. The Science of Geography (Washington, D. C.: National Academy of Sciences, National Research Council, Publication 1277, 1965).
10. Peter Haggett, Locational Analysis in Human Geography (New York, St. Martin's Press, 1966).
11. Peter E. Lloyd and Peter Dicken, Location in Space: A Theoretical Approach to Economic Geography (New York: Harper and Row, 1972).
12. Michael Eliot Hurst, A Geography of Economic Behavior (North Scituate, Mass: Duxbury Press, 1972).
13. Wolf Tietze, "A New Orientation for Economic Geography?" Geoforum, Vol. 5 (1973), p. 3.
14. Daniel Bell, The Coming of Post-Industrial Society: A Venture in Social Forecasting (New York: Basic Books, 1973).
15. Michael Chisholm, "In Search of a Basis for Location Theory: Micro-economics or Welfare Economics?" in Christopher Board, et al.,

editors, Progress in Geography (London: Edward Arnold, Vol. 3, 1971), pp. 111-133.

16. Ibid., p. 122.

17. Ibid., p. 130.

18. Some of the most useful books on welfare economics include: William J. Baumol, Welfare Economics and the Theory of the State (Cambridge, Mass: Harvard University Press, 1965); M. J. Farrell, editor, Readings in Welfare Economics (London: Macmillan Press, 1973); J. Graaff, Theoretical Welfare Economics (London: Cambridge University Press, 1967); Edward J. Mishan, Welfare Economics: London, An Assessment (Amsterdam: North-Holland Publishing Co., 1969); E. Victor Morgan and Ann D. Morgan, The Economics of Public Policy (Edinburgh: Edinburgh University Press, 1972); and S. K. Nath, A Reappraisal of Welfare Economics (New York: A. Kelley Publishers, 1969).

19. Chisholm, op. cit.

20. Peter O. Muller, "Structuring of the American Metropolis: A New Focus for Economic Geography in the Seventies," paper presented at the N.C.G.E. meeting, Chicago, October, 1974.

21. See such recent studies, for example, as Anthoney J. Mumphrey and Julian Wolpert, "Equity Considerations and Concessions in the Siting of Public Facilities," Economic Geography, Vol. 49 (1973), pp. 109-121; C. Murray Austin, "The Evaluation of Urban Public Facility Location: An Alternative to Benefit-Cost Analysis," Geographical Analysis, Vol. 6 (1974), pp. 135-145; I. S. Koropeckyi, "Equalization of Regional Development in Socialist Countries: An Empirical Study," Economic Development and Cultural Change, Vol. 21 (1972), pp. 68-86; and Robert Earickson, et al., "An Extension of Spatial Analysis to Social

Behavior," Geographical Analysis, Vol. 4 (1972), pp. 65-80.

22. See, for example, Leonard Guelke, "An Idealist Alternative in Human Geography," Annals, Association of American Geography, Vol. 64 (1974), pp. 193-202 and Michael E. Eliot Hurst, "Transportation and the Societal Framework," Economic Geography, Vol. 49 (1973), pp. 163-180. Taaffe advacates continuation of the theoretical and quantitative approaches to geographer in his recent presidential address. See Edward J. Taaffe, "The Spatial View in Context," Annals, Association of American Geographers, Vol. 64 (1974), pp. 1-16.